

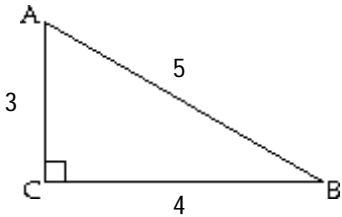
3.2 Trig. Functions

Name _____ Date _____ Period _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

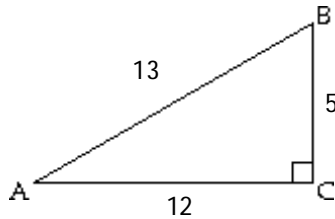
Find the values of all six trigonometric functions of angle A. Write fractions in lowest terms.

1)



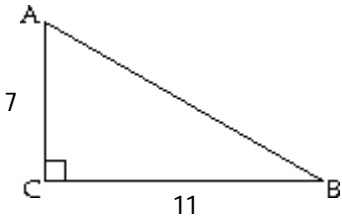
1)

2)



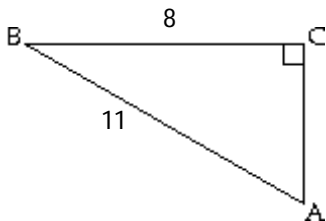
2)

3)



3)

4)



4)

Assume that θ is an acute angle in a right triangle satisfying the given conditions. Evaluate the remaining trigonometric functions.

5) $\sin \theta = 3/7$

5)

6) $\cos \theta = 5/11$

6) _____

7) $\tan \theta = 5/9$

7) _____

8) $\csc \theta = 23/9$

8) _____

9) $\cot \theta = 11/3$

9) _____

Give the exact value *without* using a calculator.

10) $\sin \frac{\pi}{3}$

10) _____

11) $\cot \frac{\pi}{6}$

11) _____

12) $\cos \frac{\pi}{4}$

12) _____

13) $\sec 45^\circ$

13) _____

14) $\csc \frac{\pi}{3}$

14) _____

Use a calculator to find the function value to four decimal places.

15) $\sin 74^\circ$

15) _____

16) $\cos 19^\circ 23'$

16) _____

17) $\tan \frac{\pi}{12}$

17) _____

18) $\sec 49^\circ$

18) _____

19) $\cot 0.89$

19) _____

20) $\cot \frac{\pi}{8}$

20) _____

Find the acute angle θ that satisfies the given equation. Give θ in both degrees and radians. You should do these problems without a calculator.

21) $\sin \theta = \frac{1}{2}$

21) _____

22) $\cot \theta = 1/\sqrt{3}$

22) _____

23) $\sec \theta = 2$

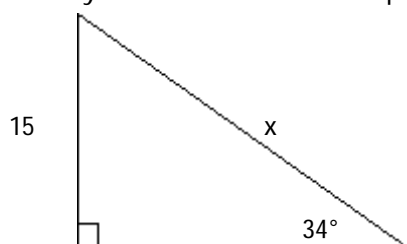
23) _____

24) $\tan \theta = \frac{\sqrt{3}}{3}$

24) _____

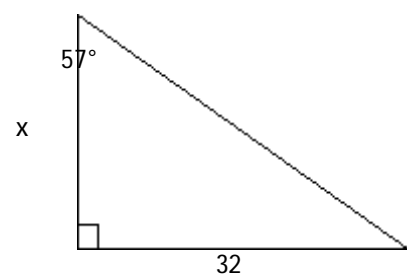
Solve for x . Round your answer to 2 decimal places.

25)



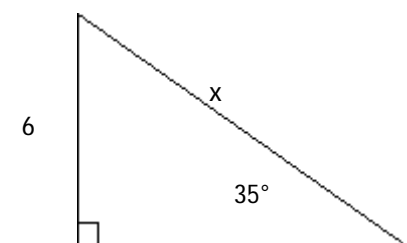
25) _____

26)



26) _____

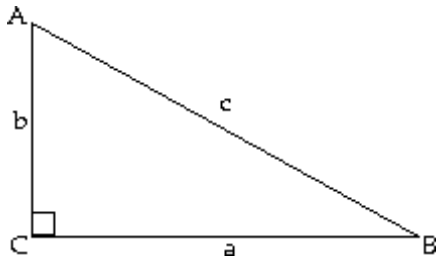
27)



27) _____

Solve the right triangle for all missing sides and angles to the nearest tenth.

28)

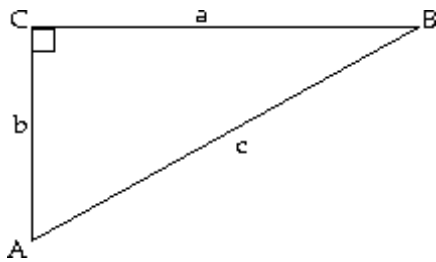


$$a = 12.3$$

$$A = 20^\circ$$

28) _____

29)



$$a = 15.58$$

$$B = 55^\circ$$

29) _____

Solve the problem.

- 30) From a distance of 43 feet from the base of a building, the angle of elevation to the top of the building is 63° . Estimate the height of the building to the nearest foot.

30) _____